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Janne Parantainen

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EXAMINER

ELPENORD, CANDAL

ART UNIT

PAPER NUMBER

2616

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,489

Applicant(s)

PARANTAINEN, JANNE

Examiner

Candal Elpenord

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>15 April 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claims 1-17** are objected to because of the following informalities: Appropriate correction is required.

Regarding claims 1,10, 17, the numerical ("130, 120"). It is suggested to applicant to remove or cross out the reference numbers inside the parenthesis. Similarly claims 2-9 and 11-16 are objected to since they depend from claims 1, 10 and 17.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1, 5-10,13-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ericsson Telefon et al (WO 01/58085 A1) in view of Forslow et al (US 6,937,566 B1).

Regarding claim 1, Ericksson et al. discloses a method ("distributing a plurality of multicast signal to a plurality of base stations", recited in abstract, lines 1-7) for routing service data (fig. 2, Router 290, "distributions of signal packets", recited in page 6, lines 5-10) of a Multicast/Broadcast Multimedia Service ("multicast transmission to multiple destinations", recited in page 5, lines 30 and page 6, lines 4 and "broadcast service", recited in page 7, lines 24-31) from a first network entity (fig. 2, SGSN 128 or block 120, recited in page 4, lines 9-14) (120) to a second network entity (fig. 2, Base Station System, 250, recited in page 3, lines 26-page 4, lines 8) (130) (130), transferring (fig. 2, Router 290, "distributions of signal packets", recited in page 6, lines 5-10) the service data of the MBMS ("multicast transmission to multiple destinations", recited in page 5, lines 30 and page 6, lines 4 and "broadcast service", recited in page 7, lines 24-31) over a Gb interface (fig. 2, "Gb", "initiate and receiving over the Gb interface", recited in page 4, lines 15-19) by utilizing said PFC (812), **regarding claim 5**, Ericksson et al. discloses the method ("distributing a plurality of multicast signal to a plurality of base stations", recited in abstract, lines 1-7), characterized in that terminals in the group of terminals ("multicast group, group of mobile terminals", recited in page 6, lines 15-31 and page 7, lines 7) belong to a same multicast group ("multicast group, group of mobile terminals", recited in page 6, lines 15-31 and page 7, lines 7), **regarding claim 6**, the method ("distributing a plurality of multicast signal to a plurality of base stations", recited in abstract, lines 1-7), characterized in that terminals (fig. 2, terminals 298, recited in page 6, lines 27-31) in the group of terminals ("group of mobile terminals", recited in page 6, lines 15-31 and page 7, lines 7) receive data from at least

Art Unit: 2616

one source ("the land based terminal as the sending source", recited in page 6, lines 27-31 and page 7, lines 7), **regarding claim 10**, a method ("distributing a plurality of multicast signal to a plurality of base stations", recited in abstract, lines 1-7) for routing service data (fig. 2, Router 290, "distributions of signal packets", recited in page 6, lines 5-10) of a Multicast/Broadcast Multimedia Service ("multicast transmission to multiple destinations", recited in page 5, lines 30 and page 6, lines 4 and "broadcast service", recited in page 7, lines 24-31) from a first network entity (fig. 2, SGSN 128 or block 120, recited in page 4, lines 9-14) (120) to a second network entity (fig. 2, Base Station System, 250, recited in page 3, lines 26-page 4, lines 8) (130), **regarding claim 13**, Ericsson et al. discloses the system (fig. 2, Telecommunication System 200, recited in page 4, lines 3-14), characterized in that the first network entity ((fig. 2, SGSN 128 or block 120, recited in page 4, lines 9-14) and the second network entity is substantially a GSM/EDGE Radio Access Network (fig. 2, Base Station System, 250, recited in page 3, lines 26-page 4, lines 8-the components inside block 250 constitute the GSM/EDGE Radio Access Network), **regarding claim 16**, Ericsson et al. discloses the system (fig. 2, Telecommunication System 200, recited in page 4, lines 3-14), characterized in that terminals in the group of terminals ("multicast group, group of mobile terminals", recited in page 6, lines 15-31 and page 7, lines 7) belong to a same multicast group ("multicast group, group of mobile terminals", recited in page 6, lines 15-31 and page 7, lines 7), **regarding claim 17**, a device (fig. 2, Internet Protocol Gateway, recited in page 4, lines 20-25) functionally connected to a Gb interface (fig. 2, "Gb", "initiate and receiving over the Gb interface", recited in page 4, lines 15-19), , characterized in that in order to route

(fig. 2, Router 290, "distributions of signal packets", recited in page 6, lines 5-10) service data of a of a multicast/broadcast multimedia service ("multicast transmission to multiple destinations", recited in page 5, lines 30 and page 6, lines 4 and "broadcast service", recited in page 7, lines 24-31) over the Gb interface (fig. 2, "Gb", "initiate and receiving over the Gb interface", recited in page 4, lines 15-19).

Ericsson Telefon et al. discloses all the subject matter of the claimed invention with the exception of being silent with regard to the following features: **regarding claim 1**, the steps of defining a packet flow identifier (PFI) associated to at least one MBMS or a group of terminals (804), creating a packet flow context (PFC) for said MBMS or group of terminals identified by said packet flow identifier (806), utilizing the PFC, **regarding claim 2**, discloses the method, characterized in that it further comprises a step wherein the PFC is mapped to an appropriate logical channel indicated by a service announcement of the MBMS (808), **regarding claim 7**, the method, characterized in that said creation of the PFC comprises a step wherein a PFC request (504) is transmitted to a network entity (130) performing said creation **regarding claim 8**, the method, characterized in that at least part of plural flow control parameters are received from a Base Station Subsystem (BSS) or Gateway GPRS Support Node (GGSN), **regarding claim 9**, the method, characterized in that transferred data of the MBMS is identified by said second network entity on the basis of said PFI, **regarding claim 10**, first network entity (120) and said second network entity (130) are arranged to negotiate a common packet flow identifier (PFI) for said MBMS or a group of terminals and said second network element (130) is arranged to create a packet flow context

(PFC) for said MBMS or group of terminals, **regarding claim 14**, the system, characterized in that said first network entity (120) is arranged to request said creation of the PFC, **regarding claim 15**, the system, characterized in that it is arranged to map the PFC to an appropriate logical channel indicated by MBMS service announcement, **regarding claim 17**, define a packet flow identifier (PFI) associated to at least one MBMS service or a group of terminals, to create a packet flow context (PFC) for said MBMS service or group of terminals identified by said packet flow identifier, and to transfer the service data of the MBMS over the Gb interface by utilizing said packet flow context.

However, Forslow et al (US 6,937,566 B1) in a similar field of endeavor discloses the following features: **regarding claim 1**, method the steps of defining a packet flow identifier (PFI) ("defining QoS application flow, PDP context", recited in col. 4, lines 51-64) associated to at least one MBMS ("multicast packets or group identity", recited in page 5, lines 19-26) or a group of terminals (fig. 2, terminals 16 and 12, recited in col. 2, lines 11-28) (804), creating a packet flow context (PFC) ("create PDP context", recited in col. 9, lines 25-31) for said MBMS or group of terminals ("reservation tunnel for several mobile hosts", recited in page 20, lines 1-21) identified by said packet flow identifier ("application flows with different QoS parameters", recited in page 8, lines 5-10) (806), **regarding claim 2**, the method, characterized in that it further comprises a step wherein the PFC is mapped to an appropriate logical channel ("mapping to GPRS logical link", recited in col. 10, lines 47-58) indicated by a service announcement ("requested quality of service requirements", recited in col. 10, lines 47-58) of the

Art Unit: 2616

MBMS ("multicast packets or group identity", recited in col. 3, lines 40-52) (808), **regarding claim 7**, the method, characterized in that said creation of the PFC (fig. 6, "create PDP context request", recited in col. 8, lines 51-67) comprises a step wherein a PFC request (504) is transmitted to a network entity ("SGSN sending a "create PDP context request to GGSN/BSS", recited in col. 8, lines 66-67 and col. 9, lines 1-16) (130) performing said creation ("GGSN/BSS sending a create PDP context message back to the SGSN", recited in col. 9, lines 13-16), **regarding claim 8**, the method, characterized in that at least part of plural flow control parameters ("different quality of service parameters, maximum packet transfer rate, a mean packet transfer rate, and a packet burst size of an individual application flow", recited in col. 4, lines 4-20) are received from a Base Station Subsystem ("BSS sending flow control message to SGSN", recited in col. 12, lines 15-21) (BSS) or Gateway GPRS Support Node (GGSN) ("providing QoS packet delay and bandwidth for application flow by GGSN", recited in col. 12, lines 56-64), **regarding claim 9**, the method, characterized in that transferred data of the MBMS ("multicast packets or group identity", recited in col. 3, lines 40-52) is identified by said second network entity (fig. 2, BSS, "classifying and scheduling of packets based on flow's reserved quality of service", recited in col. 12, lines 27-51) on the basis of said PFI ("identifying applications flow and PDP context", recited in col. 10, lines 19-35), **regarding claim 10**, first network entity (fig. 2, SGSN 50, recited in col. 2, lines 56-67 and col. 3, lines 1-3) (120) and said second network entity (fig. 2, Base Station System 30, recited in col. 2, lines 11-28) (130) are arranged to negotiate ("PDP context through negotiations", recited in col. 14-37) a common packet flow identifier (PFI) ("all

Art Unit: 2616

application flows receiving the QoS established in reservation for PDP context/data session", recited in col. 9, lines 3-11 and "reservation request for a particular QoS for application flows", recited in col. 5, lines 60-67 and col. 6, lines 1-15) for said MBMS ("multicast packets or group identity", recited in col. 3, lines 40-52) or a group of terminals ("merging of data packets for same mobile hosts", recited in col. 6, lines 16-26) and said second network element (fig. 2, Base Station System 30, recited in col. 2, lines 11-28) (130) is arranged to create a packet flow context (PFC) for said MBMS or group of terminals, **regarding claim 14**, the system, characterized in that said first network entity (fig. 2, SGSN 50, recited in col. 2, lines 56-67 and col. 3, lines 1-3) (120) is arranged to request said creation of the PFC ("SGSN sending a "create PDP context request to GGSN/BSS", recited in col. 8, lines 66-67 and col. 9, lines 1-16), **regarding claim 15**, the system, characterized in that it is arranged to map the PFC to an appropriate logical channel indicated by MBMS service announcement (See claim 2 rejection above), **regarding claim 17**, define a packet flow identifier (PFI) associated to at least one MBMS service or a group of terminals, to create a packet flow context (PFC) for said MBMS service or group of terminals identified by said packet flow identifier, and to transfer the service data of the MBMS over the Gb interface by utilizing said packet flow context (See claims 1 and 10 rejection above). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Eriksson Telefon by using features as taught by Forslow et al. in order to provide quality of service for different application flows (See col. 7, lines 21-65 for motivation).

5. **Claims 3-4 and 11-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ericsson et al (WO 01/58085 A1) in view of Forslow et al (US 6,937,566 B1) as applied to claims 1, 10 above, and further in view of Eriksson et al (US 2002/0114279 A1).

Ericsson et al. discloses the method/system and the transmission over the Gb interface (See rejection in above paragraph, and Forslow et al. discloses the PFC and PFI (See rejection in above paragraph). However, they are silent with regard to the following features: **regarding claim 3**, Ericksson et al. discloses the method, characterized in that it further comprises a step, wherein the first network entity performs flow control of the service data of the MBMS on PFC and Base Station System General Packet Radio Service (GPRS) Protocol (BSSGP) Virtual Connection (BVC) levels (810), **regarding claim 4**, Ericksson et al. discloses the method, characterized in that said flow control is additionally performed on a level (704) located between said PFC and BVC levels, said level (704) comprising at least one block (708) where to at least one PFC is logically connected, **regarding claim 11**, characterized in that said system is arranged to perform flow control of said service data of said MBMS at least on PFC and Base Station System General Packet Radio Service (GPRS) Protocol (BSSGP) Virtual Connection (BVC) levels (702, 706) prior to transmission over the Gb interface, **regarding claim 12**, the system, characterized in that said flow control further comprises a level (704) located between said PFC (702) and BVC (706) levels,

said level (704) comprising at least one block (708) whereto at least one PFC is logically connected.

However, Eriksson et al (US 2002/0114279 A1) in a similar field of endeavor discloses the following: **regarding claim 3**, Eriksson et al (US 2002/0114279 A1) discloses the method ("flow control mechanism", recited in paragraph 0007, lines 1-5), characterized in that it further comprises a step, wherein the first network entity (fig. 3, SGSN, recited in paragraph 0022, lines 1-3) performs flow control of the service data ("control of data flows", recited in paragraph 0019, lines 1-10) of the MBMS on PFC (fig. 3, Flow Control per PFC, recited in paragraph 0019, lines 1-10) and Base Station System General Packet Radio Service (GPRS) Protocol (BSSGP) Virtual Connection (BVC) levels (fig. 3, Flow Control Per BVC, recited in paragraph 0022, lines 1-12)(810), **regarding claim 4**, Eriksson et al. discloses the method ("flow control mechanism", recited in paragraph 0007, lines 1-5), characterized in that said flow control is additionally performed on a level (fig. 3, Flow Control per MS, recited in paragraph 0015, lines 1-7) (704) located between said PFC (fig. 3, PFC Flow Control) and BVC levels (fig. 3, BVC Flow Control), said level (fig. 3, Flow Control per MS) (704) comprising at least one block (fig. 1, MS Flow block connecting to PFC block) (708) whereto at least one PFC (fig. 1, PFC block) is logically connected (fig. 1, MS Flow block connecting to PFC block), **regarding claim 11**, Eriksson et al. discloses the system (fig. 1 and fig. 3, Mobile Telephone/network system, recited in paragraph 0016, lines 1-3) characterized in that said system (fig. 1 and fig. 3, Mobile Telephone/network system, recited in paragraph 0016, lines 1-3) is arranged to perform flow control ("flow

Art Unit: 2616

control per packet context", recited in paragraph 00014, lines 1-11) of said service data of said MBMS ("flow control mechanism of data packet in mobile communication systems", recited in paragraph 0007-0008) at least on PFC (fig. 3, Flow Control per PFC, recited in paragraph 0019, lines 1-10) and Base Station System General Packet Radio Service (GPRS) Protocol (BSSGP) Virtual Connection (BVC) levels (fig. 3, Flow Control Per BVC, recited in paragraph 0022, lines 1-12) ((702, 706), **regarding 12**, Eriksson et al. discloses the system (fig. 1 and fig. 3, Mobile Telephone/network system, recited in paragraph 0016, lines 1-3), characterized in that said flow control ("flow control per packet context", recited in paragraph 00014, lines 1-11) further comprises a level (fig. 3, Flow Control per MS, recited in paragraph 0015, lines 1-7) (704) located between said PFC (fig. 3, PFC Flow Control) (702) and BVC (706) levels (fig. 3, BVC Flow Control), said level (fig. 3, Flow Control per MS) (704) comprising at least one block (708) (fig. 1, MS Flow block connecting to PFC block) whereto at least one PFC is logically connected (fig. 1, MS Flow block connecting to PFC block). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Eriksson et al. with Eriksson et al (US 2002/0114279 A1) by using features as taught by Eriksson et al in order to provide quality of service per packet flow context (See paragraph 0009, lines 1-13 for motivation).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Forslow et al (US 6,608,832 B2), Forsell et al (US 2003/0179726

Art Unit: 2616

A1) and Soderbacka et al (US 2003/0114158 A1) are cited to show method and systems that are related to the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candal Elpenord whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CE

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

